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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/712,696	11/12/2003	Robert Allan Unger	81097/7114	9238

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FITCH EVEN TABIN & FLANNERY
120 SOUTH LASALLE SUITE 1600
CHICAGO, IL 60603

EXAMINER

LE, VU

ART UNIT	PAPER NUMBER
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2613

DATE MAILED: 03/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/712,696

Applicant(s)

UNGER, ALLAN ROBERT

Examiner

Vu Le

Art Unit

2613

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-17 and 19 is/are rejected.
- 7) ☒ Claim(s) 18 and 20 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-3, 7, 10-15 are rejected under 35 U.S.C. 102(b) as being anticipated by Guetz et al, US 6,091,777.

Re claim 1, Guetz discloses a method for use in providing dynamic bit rate encoding (figs. 1 & 3, "Objects of the Invention", "Summary of the Invention", col. 6, lines 38-62), comprising: detecting a first available bandwidth (col. 13, lines 11-24); determining a first encoder bit rate according to the first available bandwidth (col. 13, lines 11-24); encoding a signal at the first encoder bit rate (see fig. 3: "encode"); detecting a change in the available bandwidth such that there is a second available bandwidth (col. 13, lines 41-50); determining a second encoder bit rate according to the second available bandwidth (col. 13, lines 41-50); and encoding the signal at the second encoder bit rate (col. 13, lines 41-50, also col. 15, lines 40-53, col. 18, lines 28-45; Note: in the cols. cited, Guetz discloses determining the encoding bit rate and updating it on a frame to frame basis based on the available bandwidth of the network. In other words, each frame will be encoded based on an updated encoding bit rate that is derived from the available bandwidth of the network).

Re claim 2, the method of claim 1, wherein the encoding the signal encoded at the second encoder bit rate includes encoding a subsequent frame of the signal. (See discussion in claim 1).

Re claim 3, the method of claim 2, further comprising: wirelessly communicating the signal encoded at the first encoder bit rate in real-time; and wirelessly communicating the signal encoded at the second encoder bit rate in real-time. (See fig. 3, also col. 1, lines 21-56, col. 9, line 66 – col. 10, line 35. In the cited figure and columns, each frame being encoded with an updated encoder bit rate (see discussion in claim 1 above) will be transmitted as compressed data (fig. 3). The transmission involves real-time transport protocol (see cited columns), and wireless communications protocols are also disclosed (see cited columns).

Re claim 7, the method of claim 3, wherein the detecting the first available bandwidth comprises detecting the first available bandwidth every frame of the signal. (See discussion w/r to claim 1 above).

Re claim 10, the limitations as claimed have been analyzed and rejected w/r to claim 1 above. Furthermore, Guetz discloses the relationship between the change in available bandwidth and predefined thresholds (col. 13, lines 41-50, also fig. 4).

Re claim 11, the method of claim 10, further comprising: determining a maximized bit rate that can be communicated within the determined available bandwidth envelope, and wherein the initiating of the encoding comprises initiating the encoding according to the maximized determined bit rate. (col. 13, lines 41-50, also fig. 4. Guetz discloses a target bit rate i.e. maximum bit rate, and the actual bit rate. The difference

of the two will adjust the predefined thresholds to ensure the target bit rate or maximum bit rate is achieved during encoding).

Re claim 12, the method of claim 10, further comprising: detecting a second change in the available bandwidth envelope; determining a second available bandwidth envelope according to the second change in the available bandwidth envelope; determining a third encoding bit rate according to the determined second available bandwidth envelope; encoding the signal at the third encoding bit rate; and wirelessly communicating the signal encoded at the third encoding bit rate. (See col. 1, lines 21-56, col. 13, lines 41-50, also col. 15, lines 40-53, col. 18, lines 28-45; Note: in the cols. cited, Guetz discloses determining the encoding bit rate and updating it on a frame to frame basis based on the available bandwidth of the network. In other words, each frame will be encoded based on an updated encoding bit rate that is derived from the available bandwidth of the network. The updated bit rate for each frame in a sequence qualifies as "first", "second", "third" encoder bit rate and so on. Wireless communications protocols are disclosed (see col. 1, lines 21-56)).

Re claim 13, the method of claim 12, further comprising: determining once every frame if an adjustment in the encoding bit rate is to be implemented. (See discussion w/r to claims 1 and 13 above).

Re claim 14, the method of claim 13, wherein the determining the second encoding bit rate comprises determining the second encoding bit rate such that the second encoding bit rate is less than the first encoding bit rate. (See col. 13, lines 11-50. In the column cited, the encoding bit rate varies depending the available bandwidth.

Thus, it is expected that when the available bandwidth decreases for the next subsequent frame, the updated encoding bit rate also decreases, and vice versa).

Re claim 15, the method of claim 10, further comprising: determining if the available bandwidth envelope exceeds a bandwidth threshold; determining if the available bandwidth during an immediately preceding frame exceeded the bandwidth threshold; and the determining the second encoding bit rate comprises determining the second encoding bit rate such that the second encoding bit rate is greater than the first encoding bit rate. (See discussion w/r to claims 10 and 14 above).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 4-6, 8-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Guetz et al as applied to claims 1-3 above and further in view of Itoh et al, US 2002/0071052.

Re claim 4, Guetz discloses a tradeoff between image quality and available bandwidth (col. 14, lines 14-28). However, Guetz fails to teach receiving a signal quality statistic from a remote receiving device; and wherein the detecting the change in the available bandwidth includes detecting the change based on the signal quality statistic as claimed. Itoh et al however, teaches the limitations of claim 4 (figs. 1-2, para 0031). Therefore, taking the combined teaching of Guetz and Itoh as a whole, it would have

been obvious to modify Guetz to include receiving a signal quality statistic from a remote receiving device, and detecting the change in the available bandwidth includes detecting the change based on the signal quality statistic as taught in Itoh for the benefit of adapting the transmission rate control to changes in the available transmission bandwidth, transmission errors and other obstacles (Itoh, para 0001, 0007).

Re claim 5, the method of claim 4, further comprising: determining if a signal quality at the receiving device has decreased; the detecting the change in the available bandwidth comprises detecting decrease in available bandwidth; and the determining the second encoder bit rate comprises decreasing the encoder bit rate such that the second encoder bit rate is less than the first encoder bit rate. (See Itoh para 0002, 0004, 0009-0010, 0023-0024, 0050-0051. Note: in the paragraphs cited, the transmission or encoder bit rate will increase or decrease relative to the previous transmission rate depending upon the changes in image quality and available bandwidth).

Re claim 6, the method of claim 4, further comprising: determining if a signal quality at the receiving device has increased; the detecting the change in the available bandwidth comprises detecting an increase in available bandwidth; and the determining the second encoder bit rate comprises increasing the encoder bit rate such that the second encoder bit rate is greater than the first encoder bit rate. (See discussion w/r to claim 5 above).

Re claim 8, the method of claim 1, further comprising: changing a modulation scheme; and the detecting the change in the available bandwidth comprises

determining the available bandwidth according to the changed modulation scheme.

(See para 0037. In the paragraph cited, Itoh suggests changing modulation scheme in response to the degree of transmission errors and the availability of transmission bandwidth to ensure error robustness of the transmitted signals. Forward error correction, and inter alia, are suggested to change modulation scheme).

Re claim 9, the method of claim 1, further comprising: altering a forward error correction; and the detecting the change in the available bandwidth comprises determining the available bandwidth according to the altered forward error correction. (See discussion w/r to claim 8 above).

5. Claims 16-17, 19 are rejected under 35 U.S.C. 102(b) as being anticipated by Itoh et al, US 2002/0071052.

Re claim 16, Itoh discloses a wireless, multi-media system (fig. 1), comprising: a central controller (10) that receives source data and wirelessly distributes at least a portion of the source data (para 0037), where the central controller (10) comprises: a dynamic, variable bit rate encoder (102); a transmitter (105) coupled with the dynamic bit rate encoder (note: coupling via 104), wherein the transmitter (105) transmits the at least the portion of the source data as encoded by the dynamic bit rate encoder; a control device (101) coupled with the dynamic bit rate encoder, the control device determines an available bandwidth according to received statistics and determines an encoding bit rate according to the determined available bandwidth (para 0031); and the

control device instructs the dynamic bit rate encoder to encode at the determined encoding bit rate (para 0024).

Re claim 17, the system of claim 16, wherein the control device determines the available bandwidth and the encoding bit rate once every frame. (See end of para 0036).

Re claim 19, the method of claim 16, further comprising: a remote device (11) wirelessly coupled with the central controller, wherein the central controller wirelessly distributes the at least the portion of the source data to the remote device encoded at the determined encoding bit rate (Itoh also discloses wireless transmission, para 0037).

Allowable Subject Matter

6. Claims 18 and 20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

Claim 18 further recites a FIFO device in the manner that is neither anticipated nor rendered obvious by the prior art of record.

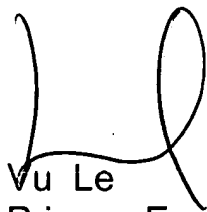
Claim 20 further recites a receiver in the manner that is neither anticipated nor rendered obvious by the prior art of record.

Contact

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vu Le whose telephone number is (571) 272-7332. The examiner can normally be reached on M-F 8:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chris Kelley can be reached on (571) 272-7331. Customer Service can be reached at (571) 272-2600. The fax number for the organization where this application or proceeding is assigned is (571) 273-7332.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Vu Le
Primary Examiner
AU 2613
(571) 272-7332
Vu.Le@uspto.gov